

REMARKS

Summary of the Office Action

Claims 1-4 stand rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,100,849 to *Tsubaki et al.* ("*Tsubaki*").

Summary of the Response to the Office Action

Applicants amend the specification to address minor informalities. Accordingly, claims 1-4 are pending and are submitted for further consideration. Applicants respectfully traverse these rejections and objections for the following reasons.

All Subject Matter Complies with 35 U.S.C. § 103(a)

Claims 1-4 stand rejected under 35 U.S.C. § 103(a) as obvious over *Tsubaki*. The Office Action alleges Figs. 2 and 3 of *Tsubaki* teach the elements of claim 1. Applicants respectfully submit that the Office Action has not established a *prima facie* case of obviousness at least because *Tsubaki* does not teach or suggest "a feeding electrode, having a first end which is connected to the feeding terminal and a second end which is connected to the ground electrode, . . . a first part . . . being extended in parallel with an elongated direction of the radiation electrode," as recited in independent claim 1. Thus, all rejections under 35 U.S.C. § 103(a) should be withdrawn.

To establish a *prima facie* case of obviousness, three basic criteria must be met (see MPEP §§ 2142-2143). First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill the art, to combine reference teachings. Second, there must be a reasonable expectation of success. Third,

the prior art references must teach or suggest all the claim limitations. All three criteria must be met to establish obviousness.

First, the Office Action does not establish a *prima facie* case of obviousness at least because it has not identified any suggestion or motivation to combine the cited reference with some level of skill in the art as cited in the Office Action. Similar to the devices discussed in the background section of the specification, *Tsubaki* shows a reverse F antenna. The Office Action, however, has not identified anything in *Tsubaki* that teaches or suggests the present invention. As such, we believe that the Office Action is using impermissible hindsight to arrive at the present invention.

The suggestion or motivation to combine is not provided by either the reference itself or by knowledge generally available to one of ordinary skill in the art. Therefore, it is respectfully submitted that the statement in the Office Action is not sufficient by itself to meet the first prong of *prima facie* obviousness. In fact, the MPEP § 2143.01 states that “the level of skill in the art cannot be relied upon to provide the suggestion to combine references.” *Al-Site Corp. v. VSI Int'l, Inc.*, 174 F.3d 1308, 50 U.S.P.Q.2d 1161 (Fed. Cir. 1999).

Second, “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).” See MPEP § 2143.01. The Office Action does not provide any citation to the references of record that shows the desirability of combining *Tsubaki* with the knowledge of those skilled in the art. Further, as discussed below, the reference includes includes features that teach away from the present invention. The mere assertion that *Tsubaki* could be combined with knowledge of those skilled

in the art is not sufficient by itself to establish *prima facie* obviousness. Therefore, it is respectfully submitted that the Office Action has not met the second prong of *prima facie* obviousness.

Third, the Office Action has not established a *prima facie* case of obviousness at least because *Tsubaki*, whether alone or in combination, teaches or suggests all the recited features of independent claim 1. Namely, *Tsubaki* does not teach or suggest at least “a feeding electrode, having a first end which is connected to the feeding terminal and a second end which is connected to the ground electrode, . . . a first part . . . being extended in parallel with an elongated direction of the radiation electrode,” features recited in claim 1.

Tsubaki does not show in Figs. 2 and 3, the feeding terminal (17) and feeding electrode (21) alleged in the Office Action. *Tsubaki* actually identifies the feeding electrode as item 17 and a first radiation electrode as item 21. See col. 5, lines 36-58 of *Tsubaki*. Besides the mis-identification of components, Figs. 2 and 3 of *Tsubaki* show that the feeding electrode 17 is not connected to the ground electrode 12, but insulated from it. See col. 3, lines 59-61 and col. 4, lines 8-13 of *Tsubaki*. The argument in the Office Action that the alleged feeding terminal is connected to the alleged feeding electrode via capacitance, is contrary to the plain and ordinary meaning of the word “connected.” Thus, the feeding electrode does not have “a second end which is connected to the ground electrode,” as recited in claim 1.

Tsubaki shows a conventional “reverse F antenna” in Fig. 5. The background of the present invention states that conventional inverted-F type antennas suffer from problems where the impedance of the feeding terminal and the radiation electrode do not match as a result of the operation frequency adjustment of the radiation electrode. The necessity of moving the

connection point of the feeding terminal becomes critical, making continuous adjustment of the reverse F antenna difficult. See page 2, line 17 through page 2, line 1 of the specification.

The present invention addresses these problems by providing a feeding electrode that runs parallel to the open side of the radiation electrode and then runs parallel to the elongated side of the radiation electrode before connecting to the ground electrode. Because the feeding electrode runs parallel to the open side of the radiation electrode which is far from the ground electrode, a maximum current may be established near the juncture of the radiation electrode and the ground electrode. The maximum current, the distance between the feeding electrode and the radiation electrode, and the feeding electrode width also help create extremely stable coupling and coupling control between the feeding electrode and the radiation electrode. See page 12, line 25 through page 13, line 10 of the specification.

Thus, *Tsubaki* does not show the present invention at all. In fact, *Tsubaki* teaches away from the present invention because the conventional reverse F antenna shown in *Tsubaki* requires that the feed terminal and ground terminal be close to each other to minimize impedance matching problems. See col. 6, lines 44-50 of *Tsubaki* and the background section page 2, lines 17-21 of the specification. As mentioned above, this is opposite to the present invention which positions the open end of the radiation electrode far from the ground electrode to establish a maximum current near the juncture of the radiation electrode and the ground electrode.

As such, Applicants respectfully assert that the third prong of *prima facie* obviousness has not been met. Therefore, Applicants respectfully assert that independent claim 1 is distinguishable over the applied art and that the rejections under 35 U.S.C. § 103(a) should be withdrawn.

In view of the above arguments, Applicants respectfully request that independent claim 1 is allowable. Therefore, the rejection of claims 2-4 under 35 U.S.C. § 103(a) should also be withdrawn, at least because their base claim is allowable, as well as for the additional features recited therein. Accordingly, claims 1-4 are all allowable.

CONCLUSION

In view of the foregoing, Applicants respectfully request reconsideration and the timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of the Response, the Examiner is invited to contact the Applicants' undersigned representative to expedite prosecution.

If there are any other fees due in connection with the filing of this Response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. §1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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